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TRADE AND DEVELOPMENT BOARD
Committee on Commodities
Committee on Tungsten
Twenty-third session
Geneva, 18 November 1991

DISCUSSIONS OF THE SESSIONAL WORKING GROUP

CHAPTER I

Examination of statistics and review of the current market situation and outlook
(Agenda item 3)

1. Under this agenda item, a representative of the UNCTAD secretariat presented two documents, namely the main working document for the examination of tungsten statistics (TD/B/C.1/TUNGSTEN/STAT/L.58) and the document on the market situation (TD/B/C.1/TUNGSTEN /89). With regard to the first document, he explained that the statistical data were assembled from replies made by governments to the secretariat's questionnaire as well as from various other sources including national publications, the United States Bureau of Mines and the International Tungsten Industry Association. Regarding estimates made in the document, he reported that basically there was no change in the situation and the positions of several countries regarding the non availability of data were well stated at previous sessions. In this regard, the Chief of Central Statistical Service (UNCTAD) pointed out that while trade data had, in general been secured for most of the countries, statistics on production and consumption of tungsten have been estimated for a number of important countries, as data were not supplied to the secretariat. He indicated that the UNCTAD secretariat stood ready to modify the present questionnaire if it was felt that the data requested via the questionnaire were not readily available at the country level in the form they were requested. He asked for guidance from the participating members of the Committee. (For updated statistics on production, consumption, trade and stocks of ores and concentrates, see Annex I in TD/B/C.1/TUNGSTEN/L.30/Add.2).

2. As regards the market situation, the representative of the UNCTAD secretariat indicated that like many other commodities, tungsten had suffered from the recent slowdown in the world economy, resulting in a slackening of consumption, a lower market offtake, and an increase of stock materials, which contributed to a strong downward pressure on prices. However, the decision taken by China at the beginning of 1991 to exercise a stricter control on exports of its tungsten mateirals had a significant effect on price developments. He noted that intermediate products including ammonium paratungstate and ferro-tungsten had recently increased their competitive edge over tungsten concentrates. About short-term outlook, he indicated that if a balance between demand and supply was maintained there were improved prospects for a more stable tungsten market in the years to come compared to the 1980s.

3. The representative of the United States of America said that total U.S. tungsten consumption in 1991 was expected to be 18.3 million pounds, approximately equal to that in 1990. Production of ammonium paratungstate (APT) in 1991 was also expected to approximate the levels of 1990 and in spite of the relatively weak U.S. economy the demand for tungsten products maintained levels from the previous year during the first three quarters of 1991. Regarding U.S. production of ores and concentrates, only one mine, located in California, was in operation in 1991, while several other U.S. mines remained inactive becasue of low prices and the surge in concentrate imports since 1987.

4. Further he stated that net imports continued to represent approximately three-quarters of apparent U.S. tungsten consumption and the People's Republic of China (PRC) remained the largest supplier to the U.S. market, despite the Orderly Marketing Agreement (OMA) established by the United States and China. In fact China's share of U.S. tungsten imports for the first eight months of 1991 was 59 per cent compared to 26 per cent in 1987. The OMA was only in effect for the first nine months of 1991, since the Administration did not seek its renewal and it was allowed to expire on September 30. The OMA had provided only limits on the amount of APT and tungstic acid exported to the United States. In 1991 the U.S. industry had successfully petitioned the U.S. Government for relief from imports of tungsten ore and concentrate from China and the U.S. Customs had been directed to levy a 151 per cent duty on imports of tungsten ore and concentrate from China.

5. Turning to the issue of the U.S. Government Stockpile he stated that no sales were undertaken during the first nine months of 1991. Regarding the outlook for 1992 he considered it generally pessimistic. Expectations were for decreased demand and production, and little relief from the import levels of 1991. Moreover many uncertainties existed in the U.S. market in the wake of the expiration of the OMA. Concerning the demand for tungsten in the United States, it was expected to remain constant or decrease slightly in 1992 compared to the levels of 1991. Beyond 1991, increased production of ores and concentrates in the United States was unlikely, assuming prices for these materials remained at current levels. Overall tungsten consumption was expected eventually to return to the levels of 1989.

6. However, several substitutes were under development for tungsten, especially in the cutting tool end-use sector and tungsten carbide was under replacement pressure from materials such as polycrystalline diamond, cubic boron nitride and silicon nitride. In conclusion he said that military applications for tungsten could assume a greater role in demand and additionally there was a need to replenish inventories of tungsten containing ordnance expended in the Gulf War.

7. The representative of France stated that her country like the rest of the OECD countries, with the exception of Germany and Japan, experienced an economic slowdown in 1991. The gross domestic product would grow by 1.5 per cent, half of the level of 1990. Production of manufacture goods, which was in decline in the fourth quarter of 1990 and the first quarter of 1991 showed an improvement with the end of uncertainties due to the Gulf war. However, this upturn was not sufficient for production in the manufacture sector to recover to the level reached in the summer of 1990. In general, the events in the Gulf had a negative effect on domestic demand and investment expenditures showed a decline in 1991.

8. She said that demand for tungsten and tungsten-derived products had suffered from the economic slowdown, particularly in the sectors of machine tools, steel making and construction. However, the weakness of demand in these sectors was to some extent compensated by orders for the armament industry, which were, for the second half of 1991, at the same level as in 1990. Excluding ferro-tungsten, the apparent comsumption of tungsten products stood at 778 metric tons in 1988.

9. She added that consumption of tungsten in the primary form in her country was made up principally of ammonium paratungstate which amounted to 637 metric tons in 1990 compared to 699 metric tons in 1989 and stocks amounted to about 3-4 months consumption. Production of processed tungsten products fell by 14 per cent, i.e., 310 metric tons at the end of September 1991 against 360 metric tons last year, although the appreciation of the United States dollar cushioned somewhat this fall. Regarding exports of tungsten oxide, shipments continued to fall to reach 32 metric tons in 1990 against 49.5 metric tons in 1989 and 80 metric tons in 1988. As for tungsten carbide, the situation was equally weak with exports reaching 170 metric tons in 1990 against 297 metric tons in 1989 and the estimates for 1991 were also poor. Regarding imports of tungsten carbide, shipments for 1990 showed a slowdown to reach 231 metric tons, and it seemed that this slowdown would accentuate in 1991. Turning to ferro-tungsten she indicated that imports were at 335 metric tons for 1990 and 173 metric tons for the first six months of 1991. Total consumption fell by 27 per cent in 1990. She also noted that recycling of ferro-tungsten continued to grow.

10. In conclusion, she said that the tungsten industry in France face poor prospects and an upturn was not expected before the end of next year. However, she noted that a stock drawdown was taking place and a recovery of demand might be expected in the future. She expressed the wish for a continued dialogue with the principal producer in order to avoid that various market practices disrupt the market and cause prejudices to everyone. In her view, this Committee could serve as a forum for such a dialogue since it was established to improve market transparency and to promote the relations between producers and consumers.

11. The representative of Japan drew the attention to the downward trend of the price of wolframite in the 1980s. In his view a major cause of this fall in price was the low-priced Chinese tungsten ores, ferro-tungsten and ammonium paratungstate which had been introduced into the world market in recent years. He noted, however, that the price of wolframite had shown some sign of recovery since the beginning of 1991 and this was probably caused by the effectiveness of the Chinese export control policy. Turning to the demand and supply situation in Japan, he stated that most of the demand for tungsten was met by refining the imported ores and concentrates into primary metals. As regards the supply side, the domestic production of tungsten ores and concentrate had been either levelling off or decreasing in recent years and it was 422 tons in 1990, representing only 1 per cent of world production.

Japan's imports of ores and concentrates in 1990 amounted to 2589 tons, an increase of 12 per cent over the previous year. On the demand side, domestic consumption of ores and concentrates had been declining in recent years and in 1990 it was 2,398 tons, 6 per cent below the previous year. He noted that this decrease was caused by the increasing use of intermediate products as raw materials for tungsten refining in Japan.

12. Turning to domestic consumption of primary metal, he said that it had been increasing in recent years and it was 5,287 tons in 1990, a 10 per cent increase over the previous year. This reflected the effectiveness of measures taken to promote domestic demand. Referring to the recycling of tungsten in Japan, he said that no statistics were available in this field. He felt that the prospects for an increase in recycling of tungsten were rather dim, given the depressed price of tungsten and the low grade of recycled metal which was used as a by-material for special steel. However, he pointed out that research and development was under way with a view to finding an economical method of recycling cemented carbide alloy scrap and developing recycled products with a wide variety of uses.

13. Finally he addressed the issue of substitution and he noted that the cemented carbide tools industry, the biggest user of tungsten in Japan, relied heavily on overseas supplies of tungsten. That tungsten was considered to be particularly sensitive to price fluctuations and uncertainty of supplies. In addition the industry was faced with increased requirements for new materials for tools. These circumstances had facilitated the tungsten-free manufacture of cutting and drilling tools in two ways. Firstly, the use of various coating materials had extended the life span of tools. Secondly, the use of substitutes had increased. In Japan, the increase in the use of thermet had been particularly noticeable. In conclusion he said that these developments, as well as the existence of special steels of molybdenum or nickel alloys, would make their weight increasingly felt in the supply and demand situation of tungsten in the years to come.

14. The representative of China said that until his country's decision to suspend quotations on 1 January 1991, the tungsten market had been suffering from a continued downfall in recent years. He pointed out that the root causes for the worsening of the tungsten market and the sliding of tungsten prices lay in the ever worsening imbalance between supply and demand resulting not from increases in tungsten production, but from the sluggish demand in major consumer countries.

15. In this connection he gave an account of the efforts made by his Government to improve the tungsten market and to stabilize prices. He continued by saying that his country had reached agreements with some consumer countries with a view to stabilizing prices and improving export management. In addition as of 1 January 1991, all quotations and deals on tungsten had been suspended. He stressed that this decision by his Government constituted a great sacrifice on his country's part in order to contribute to the stabilization of the international tungsten market. However, the fundamental improvement and lasting stability of the world tungsten market required the joint efforts of all producer and consumer countries. He also thought that unilateral trade protectionist measures and trade reprisal measures taken by some countries were not conducive to a thorough solution of the problem. In conclusion he said that in his view the problem should be resolved through international co-operation and joint measures and the Chinese Government was ready to join other delegations in exploring and seeking feasible ways and means to solve this problem.

16. The representative of Germany stated that the interest from the side of the industries in the work of the Committee had not grown and noted that the Committee was depending on their knowledge and experience since government officials in market-oriented economies were not involved in business decisions. In this connection he raised the question on how to make the Committee more efficient and attractive to the relevant companies in the tungsten business. In conclusion he invited the Committee members to propose ideas which could pave the way for increasing the efficiency and attractiveness of the Committee.

17. The representative of Sweden said that Swedish mine production in her country ceased in 1989, as the sole mine was closed down due to unfavourable market conditions. Swedish industries were at present entirely dependent on imports for their consumption. The consumption of ores and concentrates amounted to about 380 metric tons in 1990 and was expected to drop substantially to about 160 metric tons in 1991. The cemented carbide sector accounted for more than 2/3 of total consumption in Sweden. She noted that total consumption in Sweden during the eighties followed a general trend characterised by a shift from primary materials to intermediates, mainly APT. She added that total swedish consumption of tungsten in 1990 reached a level of 2 310 metric tons (metal content). For 1991 and 1992 total consumption of tungsten products was expected to fall to around 1 700 and 1850 metric tons, respectively. Finally, she underlined that it was the opinion of her delegation that the exercise on statistics should be undertaken on a

reciprocal basis. She emphasized that it was clearly still easy to identify statistical gaps.

18. The representative of Portugal said that his country was the sole producer of tungsten in the EEC, with only one mine in production. For the last three years, the portuguese production of tungsten had stabilized at around 1.400 tonnes of metal content and was expected to drop to 960 tonnes of metal content in 1991.

19. Concerning intermediate products and ferro-tungsten there was no production due, mainly, to low market prices.

20. Referring to the current situation in the tungsten market, he felt that the Committee might contribute to achieve a better transparency. In this connection, he stressed that providing reliable statistics was of great importance to the industry.

21. Finally he expressed the hope that the Committee would find the means to attract the industry to participate in its work.

22. The representative of the Union of Soviet Socialist Republics informed the Committee about the fundamental changes in the economic management structure of the Soviet Union and its republics. All enterprises which came earlier under the Soviet Ministry of Metallurgy, were now under the direction of authorities in individual republics. Under the present circumstances 85 per cent of tungsten production is concentrated in the Russian republic and a new, non-governmental company "Wolfram" had been established. The remaining 15 per cent of the tungsten production is situated in Kazakhstan and Uzbekistan. Concerning the question about provision of statistical data on tungsten production and consumption in the Russian Republic, it was at present under consideration. In this connection, he expressed the hope that at the next session of the Committee these data would be made available. With regard to import figures he said that this question was linked the attitude of China and required its agreement. Turning to exports he stated that they were insignificant. In conclusion he pointed out that the USSR attached great importance to the question of stabilizing the tungsten market and prices.

23. Referring to anti-dumpting measures, the representative of European Economic Community said that following the pressure for protection the of production capacities in the Community, the European Economic Community took a

number of anti-dumpting measures in April 1990, with a view to improving prices for certain tungsten materials. The duties which were intended initially to be provisional were renewed in September 1990. Meanwhile, an agreement was reached between two Chinese export companies and the European Economic Community based on minimum price undertakings which took into account demand conditions in the EEC. The EEC and the parties concerned decided to follow trade volumes and price developments in the market and the observance of the agreement clauses. So far, there was nothing to indicate whether the recent price improvement would satisfy the conditions required for removing the anti-dumpting duties.

24. The representative of the International Tungsten Industry Association in his statement commented on the world supply/demand balance and other factors influencing the tungsten market. He started by suggesting to the Committee that pricing of tungsten products be recorded in a similar fashion to enable the Committee to appreciate the disparity between prices of the same material in different geographical sectors and to make apparent the premia between concentrate and upgraded products. Referring to the current situation in the tungsten sector he provided the ITIA's calculations for worldwide supply and demand of all tungsten materials. In this connection be noted that in his view figures for supply were more inportant than production figures for assessing the situation in the tungsten industry. Turning to prices he said that since the overall surplus in metric tonnes, W content increased from 2850 in 1988 to 4800 in 1990, low prices over the last 3 years were inevitable with such a supply overhang. Regarding 1991 he said that although production in market economy countries seemed likely to be reduced, import levels during the first 6 months have remained as high as in 1990. Further he observed that intervention of governments in the tungsten market had increased as testified by the 1987 Orderly Marketing Agreement between China and the USA and the agreement between the EEC and China. He felt that the impact of such agreements was lessened if alternative tungsten materials could be used and added that the price of concentrate became increasingly irrelevant if an upgraded product, e.g., amonium paratungstate (APT) could be bought as cheaply. Further he noted that following China's announcement of a suspension of exports of concentrate the MB quotation for wolframite began rising and that the price of ferro-tungsten had undercut the scheelite market. He concluded that despite recent improvement in concentrate prices there were few grounds for optimism in terms of increased demand for tungsten and there was still need to co-ordinate the essentials - supply and pricing.

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DISCUSSIONS OF THE SESSIONAL WORKING GROUP

CHAPTER II

Consideration of industry views on particular aspects of the tungsten industry
(Agenda item 5)

1. At its twenty-third session, the Committee was addressed by two guest speakers, Professor Zheng Ji Tao of Zhuzhou Cemented Carbide Industry Company (China) and Dr. Wolf-Dieter Schubert of the Institute of Chemical Technology of Inorgonic materials at the Technical University of Vienna.

2. The presentation of the first speaker was on research and development of tungsten metal and tungsten carbide powder in the past ten years. He recalled that in the 1950s China was dependent on imported technology. Although advanced technology and equipment are still imported such as from Sandvik (Sweden) and other western countries, China also pursued its own efforts in the country's renowned factories, universities, colleges as well as research institutes like Zhuzhou Cemented Carbide Works, Central South University of Technology, Beijing University of Iron and Steel Technology, the General Research Institute of Nonferrous Metals and the General Iron and Steel Research Institute. In conclusion, he said that world-wide research and development of tungsten powder and tungsten carbide powder had not only a long history but such research and development was also being intensified. In this respect, he referred to international co-operation in the demain of research

and development. In the past ten years, the focus in the area of tungsten metal and tungsten carbide powder was still on the dynamics of hydrogen reduction and carbonization, the behaviour of these elements, and powder morphology and particle size.

3. The second speaker presented the general trends in current research and development activities relating to tugsten and tungsten alloys, and focused on selected research items which he felt were typical of today's research and development in tungsten compounds. In this respect, he covered three main areas, namely: The background of research and development activities with respect to the general market situation and current trends in materials technology; the typical tungsten consumption pattern to illustrate the possible impacts of research of development activities based on the end-users market; and research and development activities in the different segments within the afore-mentioned pattern in relation to their economic importance. He indicated that research and development had focussed on the engineering of powders and alloys (i.e. built-in quality, process economy and new manufacturing processes), rather than on spectacular new end-uses for tungsten. He also addressed issues relating to product substitution, waste recycling and environmental considerations and referred to a number of areas where new end-uses were opening up.

4. During the question time, comments were made regarding research and development in China, the relationship between research and development and product diversification in Zhuzhou Cemented Carbide Work, the characteristics of government-funded and industry-funded research and development projects and the problem of reversibility in the process of substitution. Clarifications were provided by the guest speakers during the discussions.